

REMARKS/ARUGMENTS

Upon entry of this response, claims 1-32 will remaining pending with claims 1 and 15 being independent claims.

Reconsideration and allowance of the application are respectfully requested.

Formal Matters

Applicants once again express appreciation for the acknowledgement of the claim of foreign priority and receipt of the certified copy in this national stage application.

The Final Office Action indicates that the drawings filed March 11, 2002 have been accepted. In this regard so that the record is clear, Applicants once again note that the papers filed March 11, 2002 do not include drawings.

Request For Telephone Interview

Applicants hereby request that the Examiner contact the undersigned to arrange a telephone interview in the event that the application is not considered to be in condition for allowance following entry of the present response. In this regard, Applicants attempted to arrange an interview prior to filing of the present response, but were not able to do so in view of the Examiner being away from the office.

Rejections Based Upon Bishop

The following rejections are set forth in the Office Action:

Claims 15-16, 18-20 and 26-32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bishop et al. (hereinafter "Bishop"), U.S. Patent No. 5,851,246.

Claims 1-14, 17 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop, U.S. Patent No. 5,851,246.

In response, Applicants respectfully submit that, Bishop is directed to apparatus for gasifying a charge containing significant amounts of organic materials to produce a synthesis gas, the apparatus comprising, as recited in claim 1 of Bishop, a) a rotary reactor having a substantially horizontal axis of rotation with a refractory lining and with respective openings only at a charge end and at an opposing discharge end; (b) a reactor charging device operative to feed the organic material containing charge through the opening at the charge end of the reactor in a manner to atmospherically seal the latter opening; (c) a reactor-rotating drive for tumbling materials charged within said rotary reactor whereby such materials are mixed and caused to move, by effect of such tumbling action and by the volumetric displacement in the bed of added materials charged into the reactor, from the charge end to the discharge end; (d) at least one flame-projecting continuous burner having a fuel supply and an oxygen-containing gas supply and any such burner being located at and directed

into said reactor, only through its discharge opening, to above the bed formed of any of such materials charged therein and being capable of producing heat sufficient to pyrolyse and gasify organic materials present inside said reactor by combustion of supplied fuel with supplied oxygen-containing gas; and (e) reactor seals substantially isolating the interior of said reactor.

Bishop discloses at column 6, line 7 et seq., that:

The discharge end 35 of reactor 18 debouches into a gas collecting hood 36 having at its upper portion an emergency stack 38, through which the product gases can flow by safety valve 40, and a lower discharge section for collection of the solid residues or ash resulting from gasification of the fluff. Rotary valve(s) 42 is provided for regulation of solids discharge and contributes to prevent combustible gas from leaking to the outer atmosphere. Screw-type conveyor 44 driven by motor 46 cools the ash and transfers it into receiving bin 48 for disposal.

Applicants further note that at column 6, line 21 et seq., Bishop discloses that:

From hood 36, the gases produced by reactor 18 are transferred through take off conduit 58 into a hot cyclone 60. The solid fine particles of fluff or soot 61 which may be entrained by the gases from reactor 18 are separated and are collected, cooled, and discharged into receiving bin 48.

Also, Applicants note that at column 7, line 59 et seq., Bishop discloses that:

The discharge end 35 of reactor 18 is provided with a foraminous cylinder 110 for screening of fine and coarse solid particles of ash discharged from reactor 18. The fine particles 116 and coarse particles 118 are collected through conduits 112 and 114, respectively, for disposal or further processing.

Thus, Applicants submit that Bishop does not disclose, as recited in Applicants' independent claim 15, an apparatus for removing recoverable waste products and non-recoverable waste products, comprising a tubular container with a feed opening for recoverable and non-recoverable waste products as material on one end, a discharge opening for the exhaust gas-solids mixture on another end, a shaft arranged centrally through the container, devices positioned on said shaft, an oxygen-containing gas supply to introduce a controlled supply of oxygen-containing gas into the container, and at least one of a device for cracking hydrocarbons and a device for gasification of solids from the container positioned after the discharge opening of the container.

Bishop does not disclose at least an apparatus comprising a discharge opening for the exhaust gas-solids mixture. In Bishop, the apparatus is structured and arranged to separate the solids from the gas, with the solids being forwarded for discharging at 116 and 118 through 112 and 114, respectively. The gases are forwarded through 38 and 58. Therefore, Bishop does not disclose a discharge opening for the exhaust gas-solids mixture. In Bishop, the gaseous recoverable waste products are discharged upward via conducts 38 and 58, and subsequently cleaned and washed before they are conveyed for further processing; whereas, solids are downwardly discharged.

In contrast, according to Applicants' claimed subject matter, the gas and solid are discharged as a mixture so that the mixture can be subjected to further processing.

Thus, Bishop does not teach each and every feature recited in Applicants' independent claim 15 so that the anticipation rejection is without appropriate basis. Moreover, claims directly or indirectly dependent upon claim 15 are also not anticipated by Bishop for at least this reason. Moreover, the dependent claims are not anticipated by Bishop for features further recited in these claims. Accordingly, the anticipation rejection should be withdrawn.

Regarding the obviousness rejection, the rejection makes unsupported assertions regarding modifications to the method and apparatus disclosed by Bishop in an attempt to arrive at Applicants' claimed subject matter. However, the rejection must point to support in the prior art and cannot rely on Applicants' disclosure to support the rejection.

Initially, Applicants respectfully submit that the obviousness rejection is without appropriate basis because the rejection does not overcome the deficiencies noted above with respect to Bishop. Therefore, Bishop does not teach or suggest all the features of apparatus claims 17 and 21-25.

Moreover, independent claim 1 is directed to a method for removing recoverable waste products and non-recoverable waste products, comprising feeding recoverable waste products and non-recoverable waste products into one end of a substantially horizontally fixed container as material, continuously or discontinuously transporting the material to another end of the container, supplying a controlled amount of an oxygen-containing gas to the container, 60 - 80% of energy input being carried out on the material in an area of a first quarter

of the container based upon the one end of the container into which the material is fed, and a remaining 20 - 40% of energy input being transferred to the material in other areas of the container, discharging an entire exhaust gas-solids mixture from the container, and subsequently subjecting the exhaust gases and the solids to an energy recovery process.

For the reasons discussed above, Bishop does not teach or suggest at least discharging an entire exhaust gas-solids mixture from the container as recited in Applicants' and/or subsequently subjecting the exhaust gases and the solids to an energy recovery process, as recited in Applicants' independent claim 1.

Still further, Applicants respectfully submit that the rejection makes simple assertions that Bishop can be modified to arrive at Applicants' claimed invention. The rejection is contending, for example, with respect to Applicants' energy requirements, this would have been obvious as the reactor can be run such that the energy requirements as claimed by Applicants are satisfied because there is control of the burner, control of the oxygen and control of temperature in the reactor of Bishop thus rendering Applicants' invention as a whole obvious to one having ordinary skill in the art. However, as with the previous rejections set forth in the application, this is not the test for obviousness. The test for obviousness is whether one having ordinary skill in the art would have been motivated to arrive at Applicants' claimed subject matter by modifying the prior art based upon motivation within the prior art. In the instant situation, the rejection is not

providing any motivation in the prior art, such as for controlling heating, but is merely alleging that it is obvious to control Bishop to arrive at Applicants' invention.

The naked assertions in the rejection are improper. Documentary evidence is required to support the rejection. Therefore, if the rejection is maintained, the Examiner is requested to support the statements of obviousness with motivation supplied in the prior art, and not merely making naked allegations.

Applicants respectfully submit that an obviousness rejection cannot be supported by mere allegations that it would have been obvious to arrive at Applicants' invention. The Examiner is reminded that a rejection must be based upon documentary evidence, and not merely official notice. In this regard, the Examiner's attention is directed to MPEP 2144.03 wherein it is noted that, "If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position". In the instant situation, Applicants respectfully submit that the rejection is improper as not utilizing documentary evidence to support the position taken in the rejection. The rejection merely makes an assertion of obviousness, but does not support this assertion by documentary evidence. There is not the slightest documentary evidence to arrive at Applicants' disclosed and claimed invention. Thus, in the event that the rejection is maintained, Applicants request that the rejection be modified to include documentary evidence supporting the position taken in the rejection.

Moreover, attention is directed to In re Ahlert and Kruger, 424 F.2d 1088, 165 USPQ 418, 420-421 (CCPA 1970), which is cited in MPEP 2144.03. In Ahlert, at 165 USPQ 421, it is stated that:

Typically, it is found necessary to take notice of facts which may be used to supplement or clarify the teaching of a reference disclosure, perhaps to justify or explain a particular inference to be drawn from the reference teaching. The facts so noticed serve to "fill in the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection. We know of no case in which facts judicially noticed comprised the principal evidence upon which a rejection was based or were of such importance as to constitute a new ground of rejection when combined with the other evidence previously used.

In the instant case, the rejection improperly utilizes an assertion, which can at best be characterized to be considered Official Notice, not to "fill in the gaps", but to provide a complete reasoning behind modification of the primary reference. Accordingly, Applicants submit that it is improper to make such naked assertion in the instant case, and a reference must be utilized in the rejection that provides motivation for modifying Bishop to include Applicants' recited features. This would afford Applicants an opportunity to address issues of lack of motivation for combining separate disclosures as well as an opportunity to argue against any asserted combination.

Applicants also note that in Bishop the burner 49 is located at the rear of the reaction vessel. Thus, in contrast to Applicants' recited 60 - 80% of energy input being carried out on the material in an area of a first quarter of the container based upon the one end of the container into which the material is fed,

and a remaining 20 - 40% of energy input being transferred to the material in other areas of the container, Bishop appears to place a higher energy input at the rear. Certainly, a higher energy input at the rear of a reaction vessel does not teach or suggest Applicants' method where the lowest energy input occurs.

Thus, Applicants respectfully submit that the only teaching or suggestion that would lead one having ordinary skill in the art to arrive at Applicants' invention is within Applicants' disclosure, and the use of such disclosure by the Examiner is improper. In order to support the conclusion that the claimed invention is either anticipated or rendered obvious over the prior art, the prior art must either expressly or inherently teach the claimed invention, or the Examiner must present a convincing line of reasoning why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Ex parte Clapp, 227 U.S.P.Q. 972 (B.O.A. 1985).

Additionally, each of the dependent claims is patentable over the prior art of record in view of the fact that each of these dependent claims includes the limitations of either independent claim 1 or 15. Moreover, each of the dependent claims is patentable over the prior art of record because it would not have been obvious to one having ordinary skill in the art to incorporate such dependent claim features into the invention as more broadly recited in the independent claims.

For example, dependent claim 8 further patentably defines that energy input in the other areas of the container is carried out by heated air.

For the reasons set forth above, the anticipation and obviousness rejections should be withdrawn, and each of the claims indicted to be allowable over the prior art of record.


CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

Applicants therefore respectfully request that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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